## ABSTRACT OF THE DISCLOSURE

An electronic key entry system for vehicles has a security ECU mounted in a vehicle for checking an electronic key via radio communication with the same. The ECU includes a CPU and a PWM output unit. The PWM output unit generates an interrupt request at every edge time of PWM pulse transmitted to the electronic key. The CPU sets a pattern of PWM output of a next cycle in response to the interrupt request so that the PWM output unit transmits a pulse corresponding to the set PWM output pattern. The CPU also stops pulse transmission, when no response is received from the electronic key in the course of communication in a plurality of stages.